CLAIMS

1. Electromagnetic retarder comprising:

- a rotor comprising coils and a body, this body being attached to

- a shaft having an axis and driving the rotor in rotation,

- a stator and/or casing surrounding or encasing the rotor,

- means for producing a current of air,

- a generator for electrically supplying the coils of the retarder rotor,

characterised in that it comprises

- at least one inlet aperture enabling this current of air to enter and at least one discharge aperture enabling this current of air to exit and in that the at least one discharge aperture is produced between two cooling chambers or through one or more cooling chambers carried by the casing and/or the stator of the retarder.

2. Retarder according to claim 1, characterised in that the cooling chambers are connected together by a throttling throat.

3. Retarder according to claim 1, characterised in that the at least one inlet aperture is produced in a part of

the wall of the stator and/or of the casing oriented so as to be radial or inclined with respect to the axis of the shaft in order to allow an entry of the air current favourably parallel to the shaft.

4. Retarder according to claim 1, characterised in that the at least one discharge aperture is produced in a part of the wall of the stator and/or of the casing oriented axially with respect to the axis of the shaft.

5. Retarder according to claim 1, characterised in that the it comprises at least one blade that creates a suction and discharge air current.

6. Retarder according to claim 5, characterised in that the blade comprises an opening in its base, this opening allowing an air current to pass.

7. Retarder according to claim 5, characterised in that the blade is an axial blade that creates a suction air current parallel to the axis of the shaft and a discharge air current parallel to this axis.

8. Retarder according to claim 1, characterised in that the rotor comprises at least one opening between the shaft and the coils, this opening allowing an air current to pass.

9. Retarder according to claim 1, characterised in that the generator rotor comprises at least one opening between the shaft and its coils, this opening allowing an air current to pass.

10. Retarder according to claim 1, characterised in that

it comprises a disengageable fan.

11. Retarder according to claim 1, characterised in that it comprises an independent fan.